NUWC-NPT Technical Report 11,890
12 August 2008

Overview of U.S. Navy Antisubmarine Warfare (ASW) Organization During the Cold War Era

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PREFACE

This report, funded under NUWC Division Newport Project No. 7HQF150, was prepared for the Director of Undersea Warfare at the Naval Undersea Warfare Center (NUWC). The report is based on a presentation provided to the Antisubmarine (ASW) Information Exchange session convened by Gary Federici (Deputy Assistant Secretary of the Navy for Command, Control, Communications, Computers, Intelligence, and Space) on behalf of John S. Thackrah, ASN (RDA) and RADM Winford (Jerry) Ellis, USN (Ret.), Special Assistant to the Secretary of the Navy for Undersea Strategy. The session was held on 29 May 2008 at the Center for Naval Analyses in Alexandria, VA.

The technical reviewer for this report was Ralph S. Klingbeil (Code 601).

The author thanks Richard C. Chapman for giving me an appreciation of the events and the people in the history of the U.S. Navy's ASW success in the Cold War. I am much indebted to VADM James R. Fitzgerald, USN (Ret.), RADM Richard F. Pittenger, USN (Ret.), and RADM William Carlson, USN (Ret.) for their insights into the workings of the ASW organization. I must also recognize the valuable assistance of Robert A. Frosch and Alan Berman, who suggested directions for elements of the research. I appreciate the contributions of Michael Van Sickel of the Director of Navy Staff (DNS-33), Sharon Williams (formerly of DNS-33), Regina Akers at the Naval Historical Center, John Williams at the Lyndon Baines Johnson Library and Museum, and Allison Gardner at the NUWC Division Newport Technical Library, who helped me to find source documents. Any errors are my own.

Reviewed and Approved: 12 August 2008

Peter D. Herstein

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE (*DD-MM-YYYY*)	2. REPORT TYPE	3. DATES COVERED (*From – To*)
12-08-2008	Technical	

4. TITLE AND SUBTITLE

Overview of U.S. Navy Antisubmarine Warfare (ASW) Organization During the Cold War Era

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

Robert C. Manke

5.d PROJECT NUMBER
7HQF150

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Naval Undersea Warfare Center Division
1176 Howell Street
Newport, RI 02841-1708

8. PERFORMING ORGANIZATION REPORT NUMBER

TR 11,890

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Naval Undersea Warfare Center Division
1176 Howell Street
Newport, RI 02841-1708

10. SPONSORING/MONITOR'S ACRONYM

NUWC

11. SPONSORING/MONITORING REPORT NUMBER

12. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

As time passes, more information is being released about the coordinated and strategic antisubmarine warfare (ASW) conducted by the United States during the Cold War. Books and articles have begun to capture the historic context, the strategic intent, and the operational realization of this important element of the Cold War. Very little has been written about the organizational construct for ASW that evolved in conjunction with U.S. maritime strategy to meet a continually evolving Soviet submarine threat. This report presents an overview of that ASW organization, set in the broader context of U.S. Navy ASW in the Cold War.

15. SUBJECT TERMS

Antisubmarine Warfare
ASW
Cold War
Navy Organization
Maritime Strategy
Soviet Submarine Threat

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Robert C. Manke
(U)	(U)	(U)	SAR	37	19b. TELEPHONE NUMBER (*Include area code*) (401) 832-8252

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LIST OF ABBREVIATIONS AND ACRONYMS

A/S	Antisubmarine warfare
ACNO	Assistant Chief of Naval Operations
ADDU	Additional duties
ADM	Admiral
ASW	Antisubmarine warfare
ASWFOR	Antisubmarine Warfare Forces
ASWFORLANT	Antisubmarine Warfare Forces, Atlantic
ASWFORPAC	Antisubmarine Warfare Forces, Pacific
ASWFORSIXTHFLT	Antisubmarine Warfare Forces, Sixth Fleet
ASWORG	Antisubmarine Operations Research Group
C^3	Command, Control and Communications
CARDIV	Carrier division
CinC	Commander-in-Chief

LIST OF ABBREVIATIONS AND ACRONYMS (Cont'd)

CinCLANTFLT	Commander-in-Chief, Atlantic Fleet
CinCPACFLT	Commander-in-Chief, Pacific Fleet
CNM	Chief of Naval Material
CNO	Chief of Naval Operations
COMINCH	Commander-in-Chief
CONUS	Continental United States
DCNO	Deputy, Chief of Naval Operations
DDR&E	Director, Defense Research and Engineering
DF	Direction-finding
DOTMLPF	Doctrine, organization, training, materiel, leadership and education, personnel and facilities
ETO	European Theater of Operations
FLT	Fleet
GIUK	Greenland–Iceland–United Kingdom
H/K	Hunter/Killer
HF	High-frequency
INTEL	Intelligence
JCS	Joint Chiefs of Staff
LR	Long-range
NAVMAT	Naval Material Command
NMSE	Naval Material Support Establishment
NUWC	Naval Undersea Warfare Center
OPCON	Operational control
OPNAV	Office of the Chief of Naval Operations
OPTEVFOR	Operational Test and Evaluation Force
OSD	Office of the Secretary of Defense
PACFLT	Pacific Fleet
Pk	Probability of kill
POC	Point of contact
PPBS	Planning, Programming, and Budgeting System
PSAC	President's Science Advisory Committee
R&D	Research and development
RADM	Rear admiral
RDT&E	Research, development, test, and evaluation
SECNAV	Secretary of the Navy
SLOC	Sea lines of communications
SOSUS	Sound Surveillance System
SSBN	Ballistic missile submarine, nuclear
SSGN	Guided missile submarine, nuclear
SSK	Diesel electric submarine
SSN	Attack submarine, nuclear
Surv.	Surveillance
SYSCOM	Systems Command
TAG	Tactical advisory group
VADM	Vice admiral
VLR	Very-long-range

OVERVIEW OF U.S. NAVY ANTISUBMARINE WARFARE (ASW) ORGANIZATION DURING THE COLD WAR ERA

1. INTRODUCTION

The Cold War was a major driver of the events of modern world history. Soviet-style communism clashed ideologically with the democratic principles of the United States and Europe. Armageddon was believed to be a distinct possibility. Brinkmanship was stretched to its limits. The U.S. national will was committed to the ultimate cost of democratic freedoms. This commitment fueled a vast military-industrial complex based on an extraordinary expenditure of national wealth for military capabilities that, it was hoped, would never be used in anger. Tanks, ships, and planes were built. Soldiers, Sailors, Airmen, and Marines were ready to conduct war on land, sea, and air. Increasingly destructive nuclear missiles with greater reach were developed and fielded, extending the risk beyond a clash of military forces. Air raid shelters were built in cities and backyards, and air raid drills were conducted in schools. Thousands of missiles were built to support a strategy of nuclear deterrence, based on the rationale of mutually assured destruction. This conflict shaped the alliances of nations: the battle between the forces of the Western democracies and the totalitarian Soviet state played out in many surrogate lower-level conflicts around the globe.

The maritime domain played an important role in this battle of wills. At first, the U.S. maritime domain was the means for delivering the output of the military-industrial complex to the probable battlefields of Europe. Then, maritime strategies evolved to form the means of delivering forces to Northern Europe to open a second front. The maritime domain provided the most secure leg of the U.S. strategic deterrent triad. It would be the battleground against the Soviet sea-based strategic deterrence.

Modern warfare dictates that serious consideration must be given to adversary submarines whenever the maritime domain is employed. Over time, more information has been released about the coordinated and strategic antisubmarine warfare (ASW) conducted by the United States during the Cold War. Books and articles have begun to capture the historic context, the strategic intent, and the operational realization of this important element of the Cold War. Very little has been written about the organizational construct that evolved in conjunction with the U.S. maritime strategy to meet the continually evolving Soviet submarine threat.* This report presents an overview of the history of the ASW organizations in the context of U.S. Navy ASW in the Cold War. It is difficult to make an organizational history exciting, but it is valuable to gain an appreciation for how organizational alignment has contributed to operational capability.

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*Two notable exceptions are the description of the organizational construct for operational intelligence in Ford, Rosenberg, and Balano[1] and a similar description for the Operations Evaluation Group in Kidman.[2]

1.1 ASW ORGANIZATIONS IN A HISTORICAL CONTEXT

Organizations exist to fulfill a purpose—to fulfill the need of a nation, a community, or individuals. Needs change with time, and thus organizations come and go unless they adapt to changing needs. The U.S. Navy's ASW organizational construct changed over the duration of the Cold War; to understand the organizational changes, it is necessary to understand how the need changed. In this report, the need will be expressed in terms of four components: national will and priority, the adversary's strategic use of submarines, the U.S. ability to attrite adversary submarines, and the U.S. strategic and tactical response based on its ASW attrition capability.

As an example, during World War II, there was a strong national will to defeat the U-boat threat, which generated priority for ASW (see figure 1). Losses of ships and men to the U-boats were great and hit many homes, but the nation also understood the risk associated with the high loss of materiel being transported to the United Kingdom and the European Theater of Operations (ETO). When the United States entered the war, the ASW capabilities of the Allied Powers were very ineffective. The initial Allied tactical response could only be defensive ASW—convoys and coastal protection. The urgent need to transport troops and materiel safely to the ETO in the face of the U-boat threat spawned the organizational construct of the Tenth Fleet. Thus, the ASW operational strategy evolved from a prewar ambivalence to the submarine threat to reactive, defensive ASW tactics and then to an offensive under centralized control.

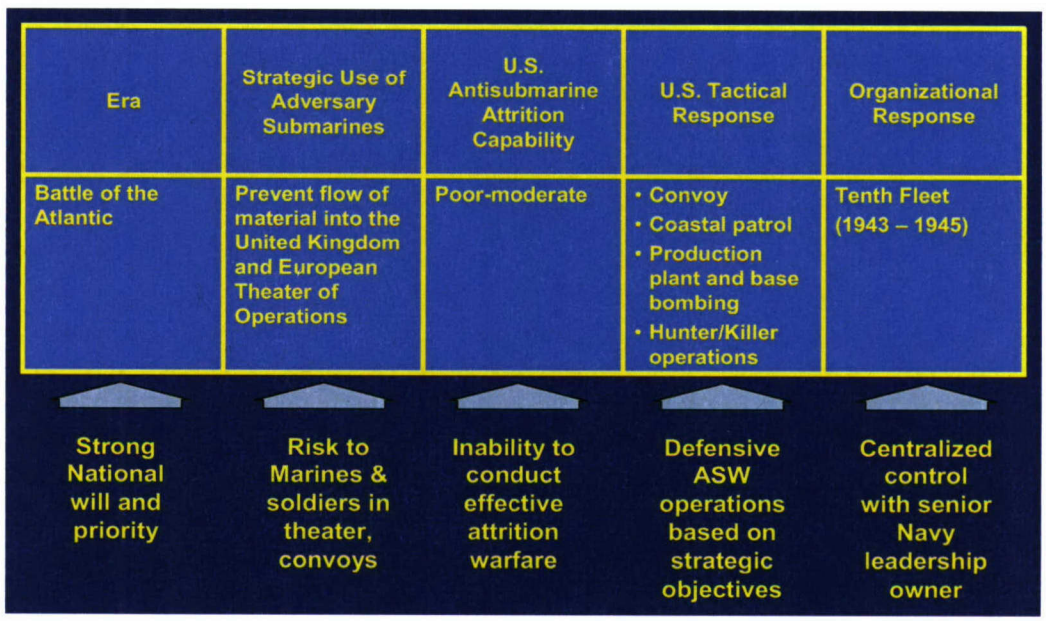

Figure 1. Historical Context for World War II ASW

This contextual perspective can be applied to the Cold War (see figure 2). Once again, a strong national will gave priority to achieving the capability necessary to defeat the Soviet Union submarine threat. The nation understood the risk posed by adversary submarines positioned off the continental United States: they were engaged in anti-access tactics against our naval forces

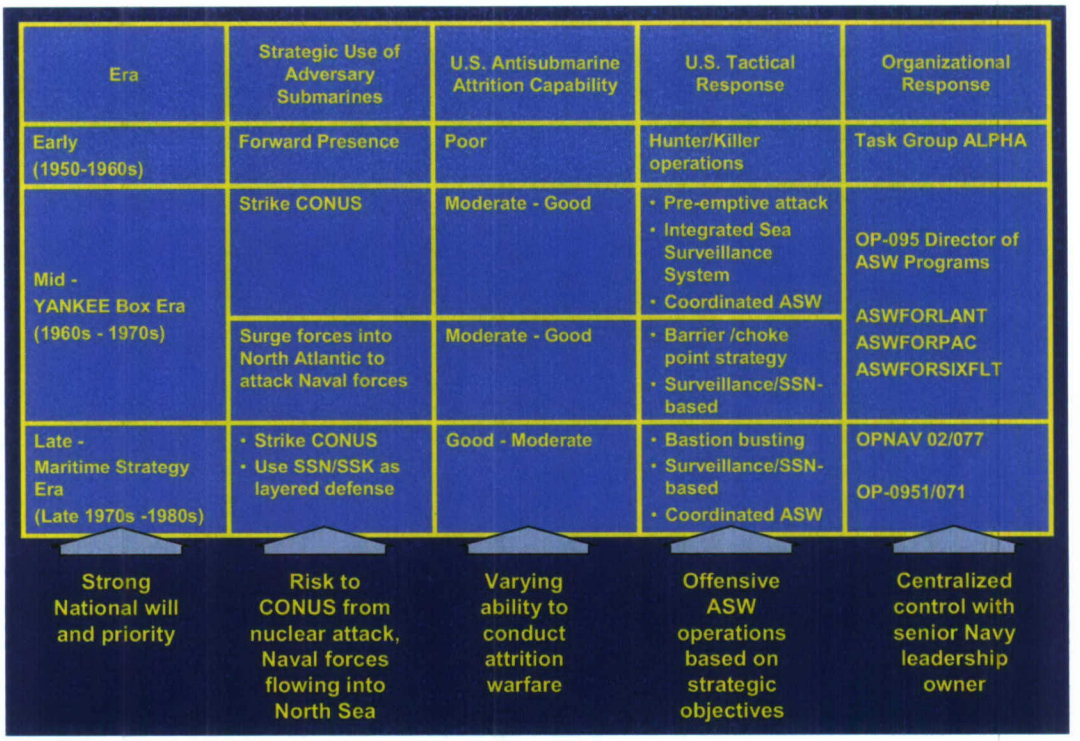

Figure 2. Historical Context for Cold War ASW

and they were aiming nuclear-tipped ballistic missiles at our cities. Because the U.S. Navy's ASW capabilities were relatively effective, the tactical response was offensive in nature. As the Soviet threat evolved and the U.S. maritime strategy changed, various issues caused the Navy to change the ASW organizational construct. This overview will address the 45-year history of Cold War ASW as three eras: the early years, 1960s–early 1970s, and late 1970s–1980s.

The overview shows how a nation's preparedness to deal with a submarine threat at the beginning of a conflict establishes the strategy that ensues (see figure 3). The lack of preparedness of the Allies in World War II resulted in the emergence of defensive capabilities.* In the Cold War, the preparedness of the United States and the commitment to maintain superiority over the Soviet threat presented offensive options to strategic planners.

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*It is interesting to note how unprepared the Imperial Japanese Navy and the United States forces were for the submarine threat. CAPT Õi (Imperial Japanese Navy) wrote: "[The Japanese Navy] preferred colorful and offensive fighting to monotonous and defensive warfare. It was only natural that convoy-escorting and A/S warfare were not jobs welcomed by the Japanese naval men." He added: "Our Navy also estimated that the U.S. Navy had no intention to wage any extensive warfare against merchant marines. The Japanese Navy took it for granted that the role to be played by American submarines would be quite the same as her own submarine forces. Those were probably the more prominent reasons why the Japanese navy neglected preparations for A/S warfare."[3]

Meigs wrote: "The American and British navies failed to develop an operational concept for an antisubmarine campaign....British and American naval leaders failed to develop a doctrine for antisubmarine warfare that took an integrated approach for applying a broad range of capabilities for finding and killing submarines. No coherent and clearly stated American naval strategy for winning the Battle of the Atlantic would be developed until 1943."[4]

Figure 3. Evolving ASW Operational Strategies

So, right or wrong, the initial strategy was not sufficient to ensure success. Decision making, adaptation of the strategy, and execution of resultant tactics had to be properly implemented. Implementation comes down to people, and the organizational design must be such that people have an opportunity to succeed at achieving the desired effect.

1.2 ASW ORGANIZATION ATTRIBUTES—LESSONS FROM WORLD WAR II

There have been a number of instances in U.S. Navy history where it was necessary to change organizational roles, responsibilities, and relationships to address a considerable submarine threat. Some basic themes that characterized the changes made in the ASW organization in World War II appeared again as the organization changed during the Cold War. These themes are found in the story of ADM Ernest J. King (see figure 4) and the Tenth Fleet.

The Battle of the Atlantic is legendary. The success of the German U-boats and their impact on World War II have been well documented.[5,6,7,8] The primary mission for the U.S. Navy was the transport of men and materiel into the United Kingdom and the ETO. Successful ASW was key to enabling mission success. Early failures were due to the need of the U.S. Navy and the Royal Navy to relearn the value of convoys. Also, there was a severe shortage of the ships, planes, and associated equipment necessary to conduct convoy and coastal patrol operations while conducting a two-ocean war. The United States was unprepared for an ASW battle.[4,9]

Figure 4. ADM Ernest J. King

Materiel concerns aside, ADM King recognized that the available ships and planes were not being employed in an optimal fashion. Operational priorities at times placed greater emphasis on one sea frontier over another, but there was reluctance by the sea frontier commanders to allocate units across command lines. Shore-based patrol aircraft were not all under the control of the Navy. The U.S. Army Air Corps controlled a number of patrol aircraft; they believed in air warfare as an independent operation and resisted the concept of combined sea-air power.[10]

ADM King also recognized that the Navy had other shortfalls. ASW tactics and procedures were not standardized across the sea frontiers and were also found to be inadequate. Training in ASW operations and systems use was inadequate. Operational intelligence was decentralized, resulting in information not reaching the right commands. He found that coordination across existing organizational elements was lacking.[10]

As Chief of Naval Operations (CNO) and Commander-in-Chief (COMINCH) of the U.S. Fleet, ADM King implemented a new construct to eliminate the organizational issues. This was the Tenth Fleet, also known as the Phantom Fleet because it did not contain any ships or planes. It was established with the following authority:

> The headquarters of the Tenth Fleet will consist of all existing anti-submarine activities of U.S. Fleet headquarters, which will be transferred intact to the Commander, Tenth Fleet. Such additional officers will be assigned to Tenth Fleet as are necessary for its function, in the same manner as any other major command. In addition, a research-statistical analysis group will be set up composed of civilian scientists, headed by Dr. V. Bush.
>
> The Commander, Tenth Fleet, is to exercise direct control over all Atlantic Sea Frontiers, using sea frontier commanders as task force commanders. He is to control allocation of anti-submarine forces to all commands in the Atlantic, including the Atlantic Fleet, and is to reallocate forces from time to time, as the situation requires. In order to insure quick and effective action to meet the needs of the changing anti-submarine situation, the Commander, Tenth Fleet, is to be given control of all LR and VLR aircraft, and certain groups of units of auxiliary carriers, escort ships, and submarines which he will allocate to reinforce task forces which need help, or to employment as "killer groups" under his operational direction in appropriate circumstances.[10]

The "transfer" of existing activities included a consolidation of existing organizational units from across the U.S. Fleet and the introduction of an ASW Measures Division that evolved into the ASW Operations Research Group (ASWORG). The Tenth Fleet effectively became the ASW Division under COMINCH Headquarters with "cognizance of all operations and all material and personnel involved in anti-submarine operations, including offensive and defensive measures, material, technique, training and practices."[10]

ADM King's responsibilities precluded managing the day-to-day operation of the Tenth Fleet. This task was given to RADM Francis S. Low, Assistant Chief of Staff for Submarine Measures. It was clearly understood that, although RADM Low was empowered to administer Tenth Fleet operations, final accountability for these operations was to ADM King.

The Tenth Fleet, disestablished on 15 June 1945, is widely recognized as having made major contributions to improving ASW during the Battle of the Atlantic (see figure 5). The history of

the Tenth Fleet contains the activities and people instrumental in changing ASW operations. This was only possible because ADM King appears to have understood the importance of the following themes:

- Root cause assessment of operational issues
- Recognition of major organizational construct issues inhibiting resolution of operational issues.
- Determination and focus of the organizational functions necessary to overcome the organizational issues.
- Empowerment of the organization to succeed.

These themes appear again in the organizational changes made during the Cold War.

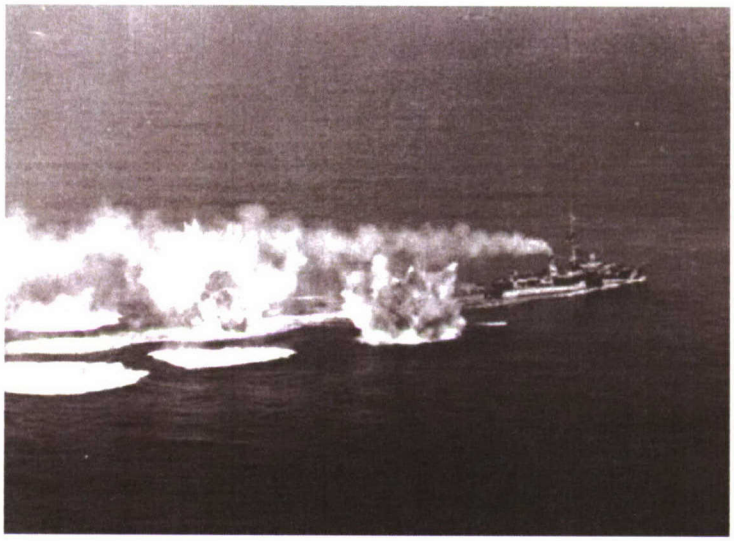

Figure 5. A U.S. Navy Destroyer Attacks a German Submarine in the Battle of the Atlantic

2. THE EARLY COLD WAR

In the late 1950s, the Soviet Union had more than 400 operational submarines. Soviet submarines were located off the east coast of the United States. Among other missions, these platforms were monitoring missile launches from Cape Canaveral. The United States, at least publicly, was uncertain whether any of these platforms carried ballistic missiles or if any of the platforms were nuclear powered. Over half of them were large enough to carry missiles. Referring to the Soviet submarine force, Premier Nikita Khrushchev stated: "Our submarines can block American ports and shoot into the American interior, while our rockets can reach any target."[11] Soviet submarines represented a new fear for the citizens of the United States and a challenge to the U.S. Navy.[11,12] The national concern was discussed in the open media. For example, in 1957 *Popular Science* ran an article entitled "Can We Defend Our Coasts Against Russian Subs?"[13]

The CNO, ADM Arleigh A. Burke (figure 6), did not believe that the U.S. Navy's ASW capability was effective. In 1958 he held a conference in Norfolk with the Commander-in-Chief, Atlantic Fleet (CinCLANTFLT), ADM Jerauld (Jerry) Wright, and the four commanders of the Atlantic Fleet ASW carrier divisions to determine why this was so and what could be done to improve our ASW capability. The Commander, ASW Carrier Division Sixteen, RADM John S. (Jimmy) Thach (figure 7), was quick to respond with what was wrong and with what he recommended be done about it.

Figure 6. ADM Arleigh A. Burke

ADM Burke was told that the ASW equipment was too old, the Fleet did not contain any antisubmarine submarines, the units within the hunter/killer (H/K) groups changed too often for the groups to become proficient, and the personnel were being rotated more quickly than they could be trained. He responded by presenting a plan for a task force chartered to experiment with new techniques and better exploitation of existing systems. In the now legendary response, ADM Burke stated: "Jimmy Thach just made an unfortunate speech. He just talked himself into a job. I'm going to give him the job he just outlined."[11,12,14]

Figure 7. RADM John S. Thach

2.1 TASK GROUP ALPHA

Antisubmarine Defense Group Alpha was established by CinCLANTFLT on 1 April 1958. RADM Thach was assigned as Commander, Antisubmarine Defense Force, Atlantic, and thus had operational control of Group Alpha. He also had duties as Commander, Carrier Division (CARDIV) Sixteen, and Commander, Hunter/Killer Force. As depicted in figure 8,* Task Group Alpha consisted of the standard H/K group (ASW carrier, fixed-wing aircraft, helicopters, and destroyers) formed around USS *Valley Forge* (CVS 45) and augmented with antisubmarine submarines and land-based patrol aircraft. RADM Thach recognized that all of the ASW elements must be integrated into an effective force.[15]

Figure 8. Task Group Alpha in 1959

RADM Thach clearly had the sanction of the CNO to measure the ASW capability of the Navy and to determine how good it needed to be. He was tasked to write the book on ASW tactics. Because Task Group Alpha was H/K based, there was a concentration on offensive ASW. It was recognized that detection of the adversary's submarines was the main problem. For this reason, the resulting exercise and experimentation were based on an integration of different platforms, sensors, and weapons through doctrine, timing, and communications.

*USN Photo 1043094.

Combined ASW tactics were developed. These exercises and experimentation also provided the training necessary to improve force, platform, and personnel proficiencies.[14]

Once again, strong will and focus was brought to bear on a major ASW risk. The problems were properly determined, and the organizational functions required to address the problems were consolidated in one organizational unit. RADM Thach was given the resources and empowerment necessary to succeed.

The effectiveness of Task Group Alpha was mixed. There is no question that the tactics, doctrine, and proficiency in coordinated ASW improved. Holding time against an adversary went from less than 30 minutes to 8 hours. RADM Thach was less than sanguine about the results. He recognized that many assets were required to prosecute one adversary; thus, the overall force effectiveness against the potential number of Soviet submarines was questionable.[11,14] In an attempt to alleviate national concerns, the exploits of RADM Thach and Task Group Alpha were highlighted in a *Time* magazine cover story (figure 9).[12*]

The effectiveness of Task Group Alpha led to the establishment of Task Group Bravo—concentrated on H/K tactics—and Task Group Charlie—concentrated on convoy escort.[15]

Figure 9. RADM Thach and Task Group Alpha in Time Magazine

2.2 ORGANIZATIONAL THEMES

ADM Burke demonstrated the same leadership skills in addressing early Cold War ASW issues as ADM King had applied to World War II ASW:

- ADM Burke convened a conference in Norfolk to address the causes of the operational issues.
- Given RADM Thach's assessment of the ASW issues, ADM Burke established Task Group Alpha as the organizational center of gravity to resolve the issues.

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*RADM Thach played an important role in another ASW organizational change. After leaving Task Group Alpha, he served a tour in OPNAV. ADM Burke decided to establish a three-star ASW command in the Pacific Fleet called ASW Forces Pacific and decided that RADM Thach was the man for the job. The Commander-in-Chief, Pacific Fleet (CinCPACFLT), objected to a three-star billet and wanted it to be a lower staff position. The CNO made a point of frocking VADM Thach in Washington prior to his assuming command in Hawaii.[14]

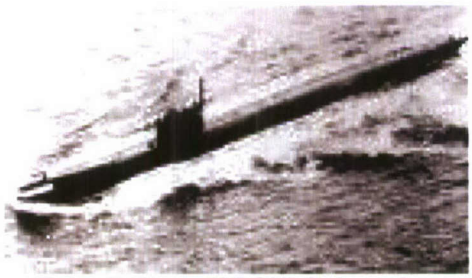
- ADM Burke clearly empowered RADM Thach with the authority required to succeed and informed other Navy leaders that they were to provide the necessary resources.*

*ADM Burke is quoted as having ordered: "If Alpha wants beefsteak for breakfast, give 'em beefsteak."[12]

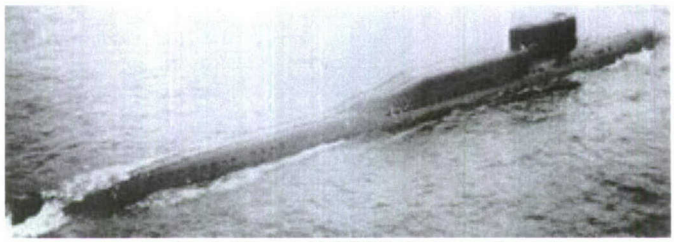
3. THE MID-ERA 1960s AND THE EARLY 1970s

As the 1960s progressed, so did the proliferation of newer and more capable Soviet submarines. Echo II-class SSGNs began deploying in 1962, Yankee-class SSBNs began in 1967, Charlie-class SSGNs began in 1969, and Delta I-class SSBNs began in 1972.[1] These submarines constituted a risk to the continental United States from (initially) surface and (later) submerged ballistic missile attack and posed a risk to the sea lines of communications (SLOC) in the event a conflict occurred in Europe.[16]

In 1961 the Navy established an Antisubmarine Warfare Committee headed by the Secretary of the Navy, Fred Korth, and the CNO, ADM George W. Anderson, to establish the full-spectrum of ASW possibilities for this continental defense problem.[17] In 1962 the Soviet Union considered stationing Golf-class and Foxtrot-class submarines in Cuba as part of a new fleet group based there.[18] Soviet submarines began to appear with consistency and in numbers in the Mediterranean Sea in 1964, and then they appeared in the Indian Ocean, Caribbean Sea, and off the west coast of Africa. The first Yankee-class SSBN patrol in the Atlantic Ocean was in 1968; the first patrol off the west coast of the U.S. occurred in 1971.[1]



Echo II-Class (SSGN) Submarine



Delta I-Class (SSBN) Submarine

Yankee-Class (SSBN) Submarine

Figure 10. Three New Soviet Submarine Classes Deployed in 1962–1972

As a result of this challenge, the U.S. evolved a choke point barrier strategy. The natural choke points separating the Norwegian Sea and Greenland Sea from the Atlantic Ocean—the Greenland–Iceland–United Kingdom (GIUK) Gap—were to be used to contain the Soviet submarines. H/K groups, long-range land-based patrol craft, submarines, and the Sound Surveillance System (SOSUS) would be used to detect and eliminate transiting submarines. Because it was understood that a transiting enemy submarine might make it through the barrier, the carrier groups would need ASW escorts to intercept such "leakers." Yet, the risk of commercial ship loss was deemed to be at an acceptable level because it was thought that the rate of attrition for Soviet submarines would be quite high. One body of opinion held that the ASW capability was adequate. Extensive debates ensued on the size and composition of the destroyer force, numbers of submarines for ASW, and the emphasis on surface ship ASW at the same time the Navy was fighting to maintain an attack carrier force of 15.[16,19,20,21] Another body of opinion held that this debate detracted from a stagnating ASW program, which would result in the U.S. losing its superior position.

The potential threat from Soviet submarines and an emerging Chinese submarine force was considered significant enough that Donald F. Hornig, the President's Special Assistant for Science and Technology—after discussions with the Secretary of Defense, Robert S. McNamara—established a President's Science Advisory Committee (PSAC) ASW Panel in May 1964.[20] The purpose of the PSAC was stated in the panel's report:

> The ASW Panel was to assess for the President:
>
> (1) the extent and nature of the submarine threat,
>
> (2) the technical possibilities for coping with this threat,
>
> (3) the extent to which the programs we are undertaking or are projecting will take advantage of the available technical opportunities for coping with the submarine threat, and
>
> (4) the organization for developing and applying the technical means for solving ASW problems.[16]

Pertaining to the Navy's management of ASW, the final report stated:

> The responsibility for ASW in the Navy now is diffused through the many bureaus, laboratories, etc., in the Navy, and we find little evidence of *effective* testing, analysis, evaluation or decision-making concerning our over-all ASW forces. Rather, we have the impression that our ASW posture is largely a residue of tradition, of history, and of considerations of "balanced forces" rather than response to the realities of the current and projected threat and the current and projected technology. It is quite natural that past history, tradition, and internal forces within the Navy would have strong influences, but they cannot be allowed to overwhelm whatever hard data, analysis, test results, etc., one can bring to bear on the problem. Clearly, the Navy recognizes its dilemma and has tried in the last year to focus much of the responsibility for ASW in two newly created positions: the Director of ASW Programs under the Chief of Naval Operations, and the Manager of ASW Systems Projects under the Chief of Naval Materiel. Although we support these actions as steps in the right direction, we consider them inadequate to cope with the problem in spite of the obvious competence, dedication, and serious intent of the individuals chosen to occupy these positions. The new offices do eliminate in part the

> excessively piecemeal approach of the old organization, but they seem to have inadequate technical staff and insufficient line authority and responsibility in ASW.
>
> We conclude that the Navy is not yet organized to maximize its ASW capability, and that to do so would require a major reorganization which would recognize and treat ASW as a technical system and provide greater management focus for responsibility and authority. In order to achieve marked improvements in our ASW effectiveness per dollar spent, there must be a high-level organizational element within the Navy with a strong technical staff which would have the responsibility for examining all elements of ASW and their interrelationship, and would also have the authority to control the major portion of the resources allocated to ASW. It would be only too easy simply to recommend a Polaris type management system for handling ASW. But we recognize that the ASW problem is characterized more by its differences that by its similarities to the Polaris system. We do, however, recommend that the Department of Defense develop a management system for ASW which will have the substance and authority that the Special Projects Office had; but this will evidently require more effort and more technically competent people to manage this more complex and more varied field.[16]

Strong words! The PSAC believed force level and composition decisions were being made with little regard to the resultant effectiveness of ASW. A *Time* magazine article described the era: "Beset by political bickering, personal rivalries and red tape, ASW resembled a 'zany fire department,' as one dissatisfied officer put it."[22] This was also the era in which, under McNamara, the Planning, Programming, and Budgeting System (PPBS) was instituted as the means of guiding Defense Department decisions. The Office of the Secretary of Defense (OSD) "was composed of many talented intellectuals, who firmly believed in the expediency of systems analysis and deprecated practical experience as being parochial."[21]

Alain C. Enthoven, Assistant Secretary of Defense for Systems Analysis, and K. Wayne Smith, his special assistant, wrote of this time:

> Our effort to come up with a convincing analysis of ASW forces, one that everyone would accept and agree upon, failed. It failed, in part, because the U.S. Navy is made up of three competing branches, each proud of its own capabilities and traditions: a submarine Navy, a surface Navy, and an aircraft Navy. The Navy conducted its ASW studies by committee, with representatives from all three branches present. When it came time to gather assumptions on which to base the Pk's of the various Navy forces, each branch competed with the others in overstating performance claims for its own preferred weapon systems. Each feared that if it did not, future studies would show that all or most of the Soviet submarine force was being destroyed by one of the other branches, which might then get more of the total Navy budget. Also, each branch felt obliged, when stating the Pk's of its particular weapons, to use the numbers that it had earlier claimed would be achieved when it justified the R&D programs for those weapons. Since we were dealing with future wars and future forces, these assumed future Pk's were in fact the justification for very substantial current R&D programs. Thus, if a branch did not claim a high effectiveness for its proposed new weapons, it stood in danger of having its R&D budget cut back.
>
> When all these inflated claims for Pk's were put together and run through a total-fleet war game, the results were, predictably, that our side won handsomely with the forces already approved by the Secretary of Defense;...[T]he Navy's belief that more forces were needed could be decisively refuted with the factors used in their own studies.... [F]or four years in a row, the Secretary of Defense asked the Navy to make an analysis of antisubmarine warfare which could be used as a basis for judgments on force levels and,

for four years in a row, the Navy made a study, got caught up in the same dilemma, and ended up disowning its own analysis as a basis for determining force levels.[23]

3.1 ESTABLISHMENT OF OP-95

As CNO, ADM George W. Anderson Jr. created the Naval Material Support Establishment (NMSE) under the command of the Chief of Naval Material (CNM), effective 1 July 1963. The CNM reported directly to the Secretary of the Navy (SECNAV) and had command of the Bureau of Naval Weapons, the Bureau of Ships, the Bureau of Supplies and Accounts, and the Bureau of Yards and Docks.[21] The NMSE was "charged with bringing together the many interfaces of the various bureaus and their supporting laboratories. In addition, in order to strengthen and focus a technical and management effort, a Rear Admiral [billet] was named ASW Systems Project Manager under [CNM]."[24]

The Office of the CNO (OPNAV) staff that ADM David L. McDonald inherited on 1 August 1963 was markedly different from today's. From an ASW perspective, responsibilities resided with the Deputy CNO for Fleet Operations and Readiness (OP-03) and the Deputy CNO for Development (OP-07). OP-03 was primarily responsible for readiness requirements and assessments, as well as tactics, training, and doctrine. OP-07 was the research, development, test, and evaluation (RDT&E) program sponsor.* The divisions under OP-03 and OP-07 are shown in figure 11.

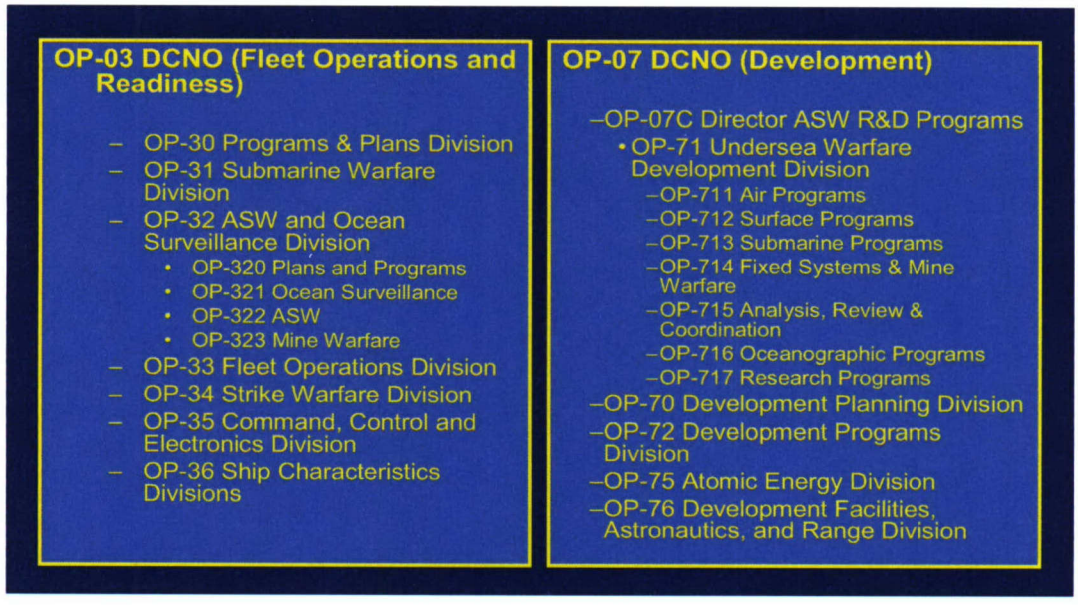


Figure 11. OP-03 and OP-07 Divisions

*OP-01 was DCNO for Manpower and Naval Reserve, OP-04 was DCNO for Logistics, OP-05 was DCNO for Air, and OP-06 was DCNO for Plans and Policy.

The battle over the types and quantities of ships that would accomplish the ASW role could not be resolved with the Navy organized this way. To resolve these organizational issues, ASW efforts were consolidated under a new position—Assistant Chief of Naval Operations for Antisubmarine Warfare/Office of the Executive Director of Antisubmarine Warfare Programs (OP-95)—established on 17 February 1964. It was originally chartered with this mission:

> To exercise centralized supervision and coordination of all Antisubmarine Warfare planning, programming and appraising, in order to insure an integrated and effective Antisubmarine Warfare effort. Acting as the Program Sponsor of the entire Navy Antisubmarine Warfare program, implements the responsibility of the Chief of Naval Operations in all ASW matters pertaining to the determination of requirements, including the development, the selection of work to be performed by the Chief of Naval Material, and the appraisal of work in progress for military worth and readiness.[25]

The charter notes that the term ASW "includes Mine Warfare in its ASW aspects. 'Mine Warfare,' as used herein, encompasses the strategic and tactical use of mines, mine countermeasures and explosive ordnance disposal."[24] It also notes that the "central authority under the Chief of Naval Material for producing resources for meeting the ASW program requirements will be the Manager, ASW projects."[24] The first Executive Director of ASW Programs (OP-95) was VADM Charles B. Martell.* The functions under his responsibility were extensive, and the list provides insight into the organizational issues that needed resolution. The chartered functions were stated as follows:

1. Acts as the central point of contact within the Office of the Chief of Naval Operations concerning ASW matters, and, as such, provides required liaison with responsible activities.
2. Appraises, on a continuing basis, the availability and performance of ASW equipments and systems of the Operating Forces of the Navy, and initiates such corrective actions as may be indicated.
3. Evaluates, on a continuing basis, the status of ASW programs and projects as regards capability, timing, and cost of the individual programs in relation to service requirements, support of Navy plans and policies. Initiates action for changes in such programs and projects when appropriate.
4. Coordinates the preparation of, and, with the advice of the DCNO (Development), approves General Operational Requirements and Specific Operational Requirements for ASW equipments, weapons, systems, and. related materials. Reviews and approves ASW research and development plans and program objectives.
5. Reviews, and, with the advice of the DCNO (Development), recommends approval for service use of ASW equipments, weapons, systems, and related materials, and procurement of any ASW items prior to approval for service use.
6. Coordinates the determination of all requirements for procurement of ASW equipments, weapons, systems, and related materials.
7. Coordinates programming and reprogramming (including Program Change Proposals) of ASW equipments, weapons, systems, and related materials.
8. Keeps the Chief of Naval Personnel's ASW Program Manager informed, on a continuing basis, of the immediate and long-term personnel requirements.

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*VADM Martell may have been selected for this position because of his tenure as OSD Deputy Director for Defense Research and Engineering (DDR&E) (March 1961–August 1963) under Harold Brown as the DDR&E (May 1961–September 1965). Because of this experience, VADM Martell was well versed in the PPBS and knew McNamara's systems analysts. VADM Martell served a short tenure as Commander, U.S. Second Fleet (August 1963–April 1964), before being recalled to the Pentagon as OP-95.[26]

9. Serves as a member of the Standing Committee on Shipbuilding and Conversion, the Ships Characteristic Board, and the Air Board.
10. Reviews financial decisions on Navy Programs, evaluates their impact on the total ASW program and initiates action to insure the adequacy of that program.[25]

OP-95 was organized into three divisions as shown in figure 12.[27] In 1966 more changes were made as the NMSE and its four bureaus were replaced by the Naval Material Command (NAVMAT) and new air, ship, ordnance, electronic, and supply systems commands and the facilities engineering command.[21] The CNM was now subordinate to the CNO. The ASW Systems Project Office resided within NAVMAT, under PM-4.

It is significant that OP-95 was established at the level of ACNO because this enabled very important relationships (see figure 13). As CNO, ADM Burke established ASW Forces, Pacific Fleet* (ASWFORPAC), on 1 May 1960 as a three-star billet filled by VADM Thach.[14] ASW Forces, Atlantic (ASWFORLANT), was also established as a three-star billet. Both of these ASW force commanders were dual-hatted since they were on the Fleet CinC staffs for ASW matters. As force commanders with operational control (OPCON), they represented the operational force at the Fleet CinC level, *and* they were responsible for the health of integrated ASW. Their key responsibilities are shown in figure 14.

This organization set up a condition in which the senior operating force commanders responsible for ASW had a single responsible senior flag officer interface in the Pentagon. It was now the primary responsibility of three vice admirals to worry about the posture of the Navy's ASW capability. OP-95 could use his authority to respond to the operating forces' demands, given his signature approval over ASW activities in OP-03, OP-07, and NAVMAT.

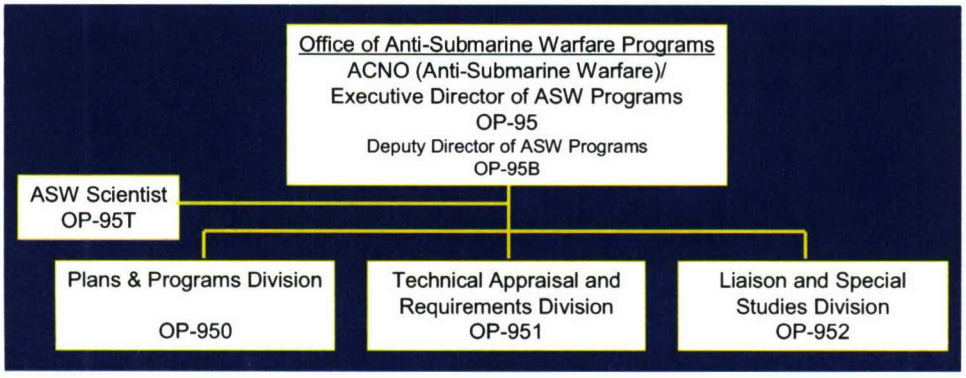
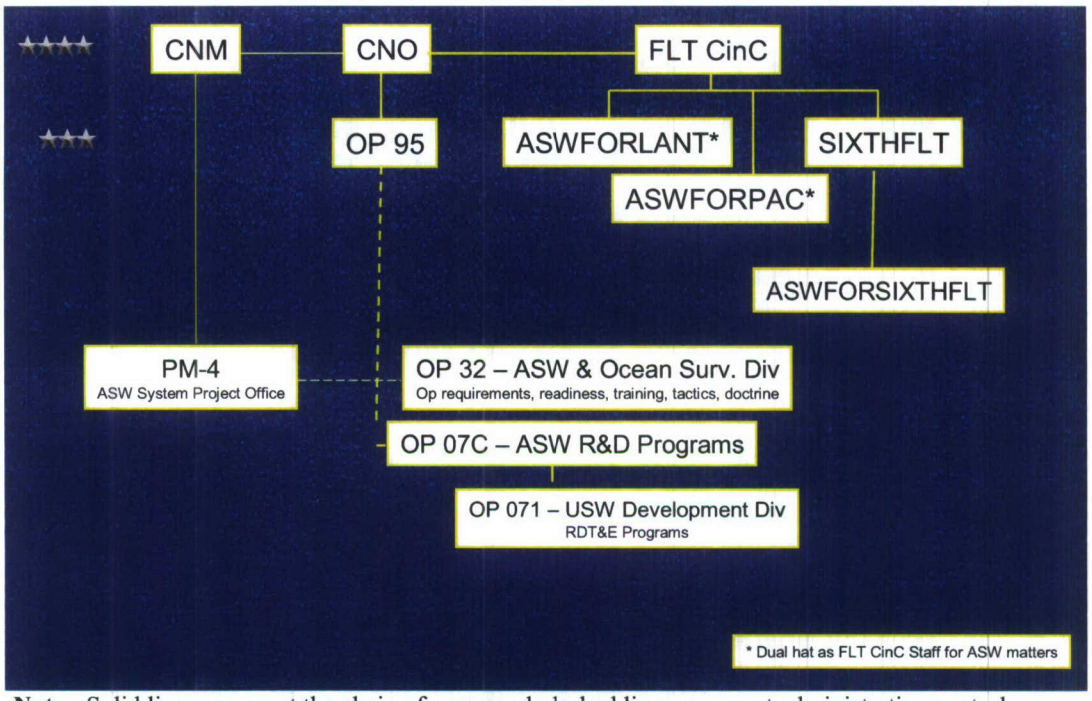


Figure 12. OP-95 Organization (October 1964)

*The Antisubmarine Defense Forces from World War II were redesignated Antisubmarine Forces and then, eventually, Antisubmarine Warfare Forces (ASWFOR).



Note: Solid lines represent the chain of command; dashed lines represent administrative control.

Figure 13. Organizational Relationships Circa 1966

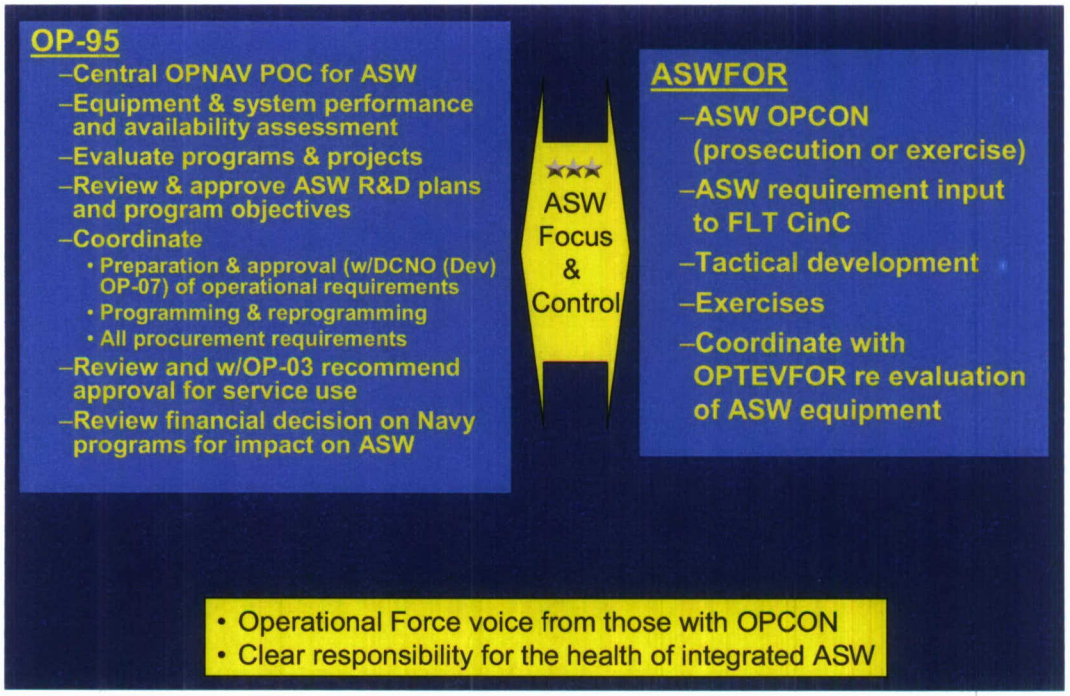


Figure 14. OP-95 and ASWFOR Key Responsibilities

The Planning, Programming and Budgeting System (PPBS) was instituted as a means of building a more effective force more economically. This planning process was new to OPNAV and required a significant improvement in the data submitted to McNamara's systems analysts.[28] In June 1966 VADM Martell established a tactical analysis group (TAG) to meet this budgetary requirement and an overarching operational demand for data. "TAG members were to serve a threefold function: to provide urgently needed analytical support to fleet commanders; to supply the Chief of Naval Operations with valid, analyzed ASW data on which he might base decisions concerning long-range plans and force levels; and to collect data on ASW equipment and training for use by the material and training commands."[2*]

At the time the report was published in April 1966, the PSAC acknowledged the changes the Navy had implemented and the progress to date but was still not confident that the new construct was sufficient.[16] There were larger Navy organizational issues that needed to be addressed.

In the memorandum forwarding the PSAC report to President Johnson, Hornig wrote:

> The lack of general agreement as to the programs for which our ASW forces are being developed contributes to our uncertainty about the effectiveness of our ASW forces....While we have qualitative superiority over the Soviet Union in ASW and related equipments, our over-all ASW capability is not as great as we should expect from a program costing approximately $3 billion per year. The principal reason seems to be an inability to take full advantage of available technical opportunities....The full exploitation of these technical opportunities requires a more effective technical and analytical organization which should include a central ASW systems research and technical center.
>
> I have discussed this report...with Secretary McNamara and Dr. Foster, Secretary Nitze and senior naval personnel. Secretary McNamara stated that the report confirmed, as he had long believed, that we are not adequately organized to carry out the analysis required for sound decision making in the ASW field and he is moving to improve matters in this direction.[29]

3.2 THE ZUMWALT YEARS

Hone[28] has analyzed how McNamara's implementation of the PPBS had wide ranging effects on OPNAV. The Navy's culture of decentralization and delegation was disrupted by mandates from the OSD for centralized planning, reappraisals, and reviews. The CNO and VCNO did not believe that they could allow the DCNOs to act independently under these conditions. Assistant CNOs (also called directors) were established to assist the CNO and VCNO in responding to the programming and planning demands of the OSD. As authorized deputies, the DCNOs resented the authority delegated to the ACNOs. The DCNOs began to operate more independently with the systems command (SYSCOM) program managers without interacting with the CNM, which was now reporting to the CNO, who had official responsibility for the programs within the SYSCOMs. The DCNOs had gone beyond the OPNAV role of review and approval to a daily monitoring of programs. A once functional OPNAV was now fractionalized, in that one part was aligned to platforms (the basic construct within OP-03 and OP-07), one part was aligned to

*This ASW TAG transitioned management to the Center for Naval Analyses Operations Evaluation Group under the technical management of Ervin Kapos at the beginning of 1971.[2]

OSD program planning, and another part was aligned to Joint Chiefs of Staff (JCS) plans and policy. The CNO struggled to keep these parts of OPNAV aligned.

Numerous studies were conducted to analyze the problems and recommend solutions, starting with the Benson Task Force in 1966 (under RADM Roy S. Benson, Assistant VCNO). No significant changes were made until March 1971 when ADM Elmo R. Zumwalt Jr., now the CNO, reorganized OPNAV. OP-03 was restructured along warfare or platform community lines: DCNO for Submarines (OP-02), DCNO for Surface (OP-03), and DCNO for Air (OP-05). OP-07 became an ACNO as Director of RDT&E (OP-098).[28]

Consistent with this reorganization, the functions within OP-95 also changed. OP-95 became OP-095 and was realigned along platform community lines (see figure 15). The new roles and responsibilities in the OPNAV organization manual also show that the organization no longer had cognizance of mine warfare systems.[30]

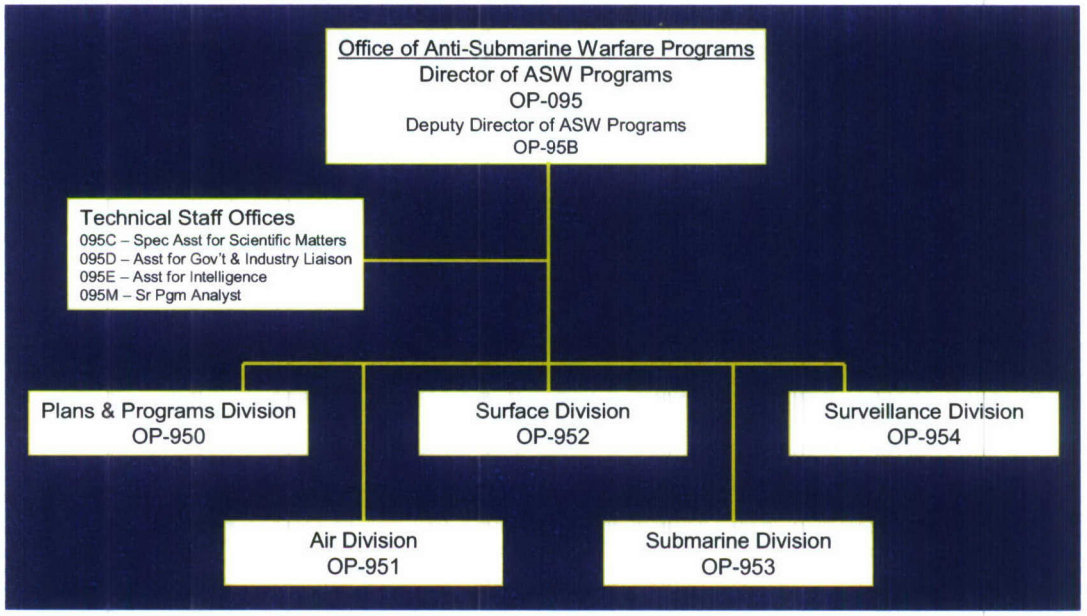


Figure 15. OP-095 in 1972

The CNO's intent was to integrate across platform communities via the ACNOs, and he continued to shift power to these directors. In November 1972, the position of Director of Tactical Electromagnetic Programs (OP-093) was abolished, and the OP-093 functions were added to OP-095, now called the Director of Antisubmarine Warfare and Tactical Electromagnetic Programs (see figure 16).[28] Tactical electromagnetic programs—deception and destruction systems and task force/task group command, control and communications (C^3)—were assigned to OP-954. As part of the reorganization, the cognizance of ASW systems distributed across OP-095 divisions were assigned to one ASW division, OP-951. OP-951 was also assigned additional duties (ADDU) as Project Manager for the ASW Systems Project Office, PM-4. OPNAV and NAVMAT now spoke with one voice on matters of ASW.[31]

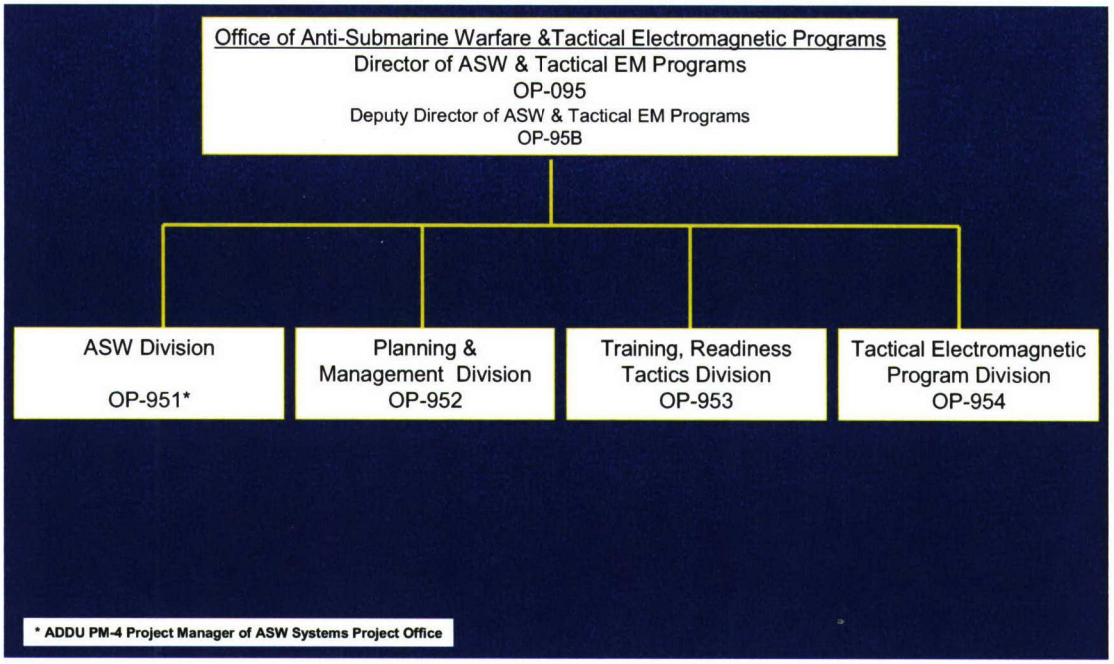


Figure 16. OP-095 in 1973

OPNAV was not the only Navy organization undergoing changes in this timeframe. A Fleet Staffs Reorganization Study was conducted in 1972.[28] As a result, ASWFORLANT was merged into the Second Fleet. On 1 February 1973, the Third Fleet was reactivated to assume the duties of the First Fleet and ASWFORPAC.[32]

3.3 THE MID-1970s

Soviet maritime strength continued to grow at an impressive rate in the mid-1970s. A balanced fleet of air, surface, and submarine capabilities created a formidable anti-access/area denial threat. The SS-N-8 submarine-launched ballistic missile provided a strategic capability from waters much closer to Soviet-controlled territory. The challenges continued to mount for the U.S. Navy.[1]

As the CNO, ADM James L. Holloway needed to replace the ships that were built during World War II. Given an annual inflation rate of 15–20% during the early 1970s, the cost of shipbuilding had skyrocketed. As a result, the Navy wanted to build fewer but more capable ships. Defense in depth of the carrier was a key driver.[28]

There were only modest OPNAV changes in this timeframe. A change that affected the ASW organization was the reassignment of the cognizance of ocean surveillance programs from OP-32 to OP-955. OP-095 became the Director of Antisubmarine Warfare and Ocean Surveillance Programs (see figure 17).[33]

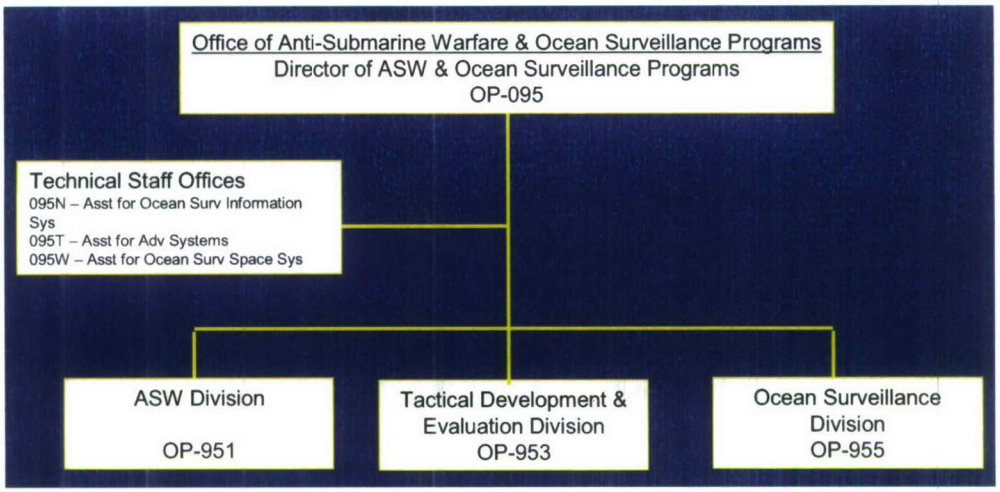


Figure 17. OP-095 in 1974

3.4 ORGANIZATIONAL THEMES

As the Soviet submarine threat grew, the U.S. defense leadership recognized both the need to maintain ASW superiority over the Soviet Navy and the need to allocate defense spending more efficiently. The new PPBS mandate for systems analysis justification for acquisitions and other requirements was stalemated by an outdated organizational construct. The diffusion of authority for ASW and the emphasis on the historical balance of forces within the Navy resulted in bureaucratic stasis on decisions about ASW force levels and composition—whether meeting ASW objectives required improved sensor and weapon capability or greater numbers of platforms (capacity) or both.

The organizational construct had to be changed. It is not clear from the documents exactly who in the Navy leadership recognized the need to consolidate cognizance for specific warfare functions at the ACNO level, i.e., to create the OP-09 executive directors, including OP-95 for ASW. However, integrating ASW requirements and analysis at the ACNO level resulted in an a single voice for ASW at OPNAV and an effective organization for meeting ASW requirements. OP-95 was able to exert the required authority through the strength of a three-star position and effective signature control over budget requests and expenditures.

4. THE MARITIME STRATEGY ERA—LATE 1970s AND 1980s

In the late 1970s, new intelligence information changed the U.S. understanding of how the Soviet Navy would fight. The earlier premise was that the Soviet Navy would interdict U.S. and allied SLOCs. The new premise was that the primary mission of the Soviet Navy was to protect Soviet SSBNs.[2] The change may have been based on espionage that revealed that this leg of their strategic nuclear strike capability was vulnerable to U.S. and allied ASW forces. Control of the seas around the Soviet Union was necessary to protect their SSBNs.

As this intelligence was emerging, the CNO, ADM Thomas B. Hayward, was beginning to reinstitutionalize strategic thinking in the Navy. According to Hattendorf:[34]

> Up to this point, much of the debate about naval issues centered around the navy's budget. The confusing mass of unit costs and program alternatives tended to be confused with strategy. Unrealistic strategies were sometimes employed for no other reason than to justify larger shares of money for one program or another, and in this way the budget tended to drive strategic concepts. "This is why," Hayward explained, "academics and others say the Navy doesn't have a strategy." To combat this problem and to remove the misperceptions, Hayward sought to change the terms of the debate from a budget battle to an analysis of the strategic issues for a global maritime power.

The resultant strategic thinking and concept generation led to the tenets of a new maritime strategy. The Navy's role would change from the protection of SLOCs and delivery of men and materiel. It would evolve to a strategy of taking the battle to the Soviet Navy by projecting forces into forward areas, disrupting their maritime defense of their homeland, and threatening their maritime strategic strike capability. It was thought that possessing the capability necessary to enact this strategy would also serve as a deterrent. Ultimately, this became the first edition of the classified maritime strategy approved by the Secretary of the Navy, John F. Lehman Jr., and the CNO, ADM James D. Watkins, in 1984, which was published as an unclassified article in a January 1986 special supplement to the *U.S. Naval Institute Proceedings*.[34]

The Navy leadership knew it did not have the capacity to execute this strategy. The Navy needed power projection forces in numbers that did not exist. The new maritime strategy provided the basis for the "Six-Hundred Ship Navy" debates.[35] One casualty during the subsequent debates over force levels was the antisubmarine carrier. The old World War II platforms needed to be replaced, but the Navy also needed attack carriers. In order to win support for the carriers, the Navy argued for multi-mission carriers. ASW had always been a team sport, but the new strategy required that it be conducted by a team with expanded offensive and defensive responsibilities.

4.1 OP-095

While the maritime strategy was evolving, more organizational changes were made to OP-095 (see figure 18). The most significant change was the transfer of the Oceanographer of the Navy to OP-095 as Head of the Naval Oceanography Division (OP-952).[36]

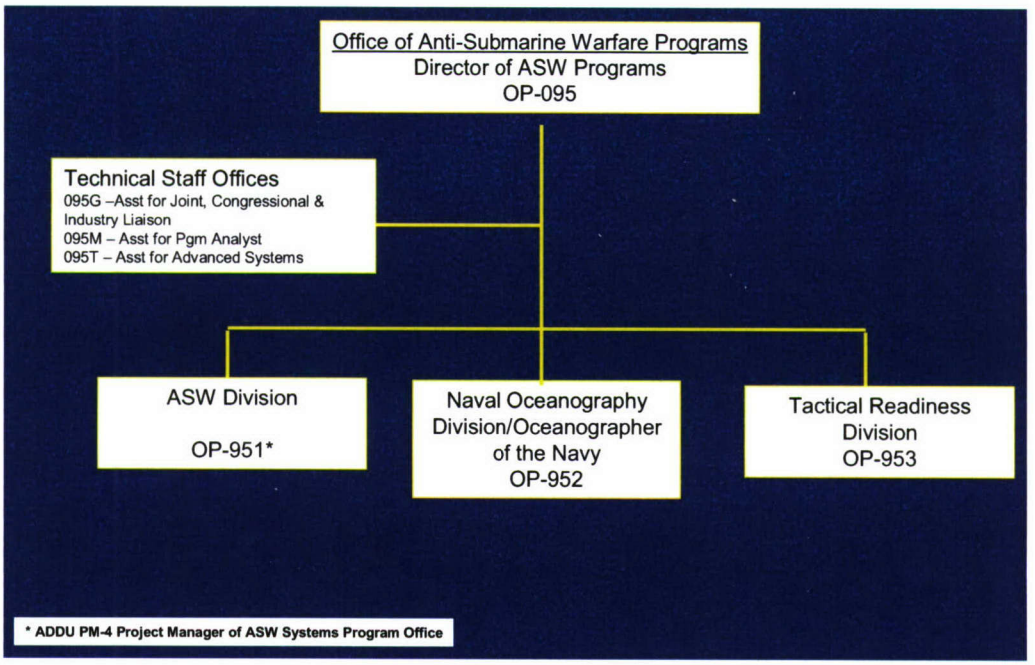


Figure 18. OP-095 in November 1979

On 2 November 1979, ADM Haywood approved a major organizational change to OP-095, establishing it as the Naval Warfare Directorate on an evolutionary basis.[37] Hattendorf writes:

> While Hayward's strategic concepts were being discussed in various fora, the CNO was directly concerned with making some organizational changes within the navy that would assist the navy's leaders in thinking about strategy. First, he wanted to establish a focal point within the navy staff for discussions on the broad aspects of naval warfare. In order to do this, in mid-January 1980, Hayward changed OP-095 from the Antisubmarine Warfare Directorate to the Directorate of Naval Warfare. The idea behind this move was to create a directorate that could coordinate the work of the various platform sponsors, the Deputy CNOs for Air, Submarine, and Surface Warfare, and to be sympathetic to them while at the same time being the main contact point for the fleet commanders and their concern for future war-fighting developments.[34]

The resulting OP-095 organization is shown in figure 19. VADM Kinnard R. McKee was the first Director of Naval Warfare. Consistent with the expanded OP-095 responsibilities, a Force Level Plans Division (OP-950) was created. The Warfare Coordination Division (OP-951) included the Air Systems Branch (OP-951C), Surface Systems Branch (OP-951D), Submarine Systems Branch (OP-951E), Undersea Surveillance Branch (OP-951F), and Anti-Air Warfare Branch (OP-951G). A Strike Warfare Division (OP-954) was created to include the Tactical Air Branch (OP-954C), Anti-Surface Unit Warfare Branch (OP-954D), Amphibious Warfare Branch (OP-954E), and Mine Warfare Branch (OP-954F).[37]

As part of the evolutionary process, the organization of OP-095 was further refined in November 1980 (see figure 20). OP-951 was purified back to ASW when the Anti-Air Warfare

Branch was removed to form the Anti-Air Warfare Division (OP-955). OP-954 was renamed the Strike and Amphibious Warfare Division.[38]

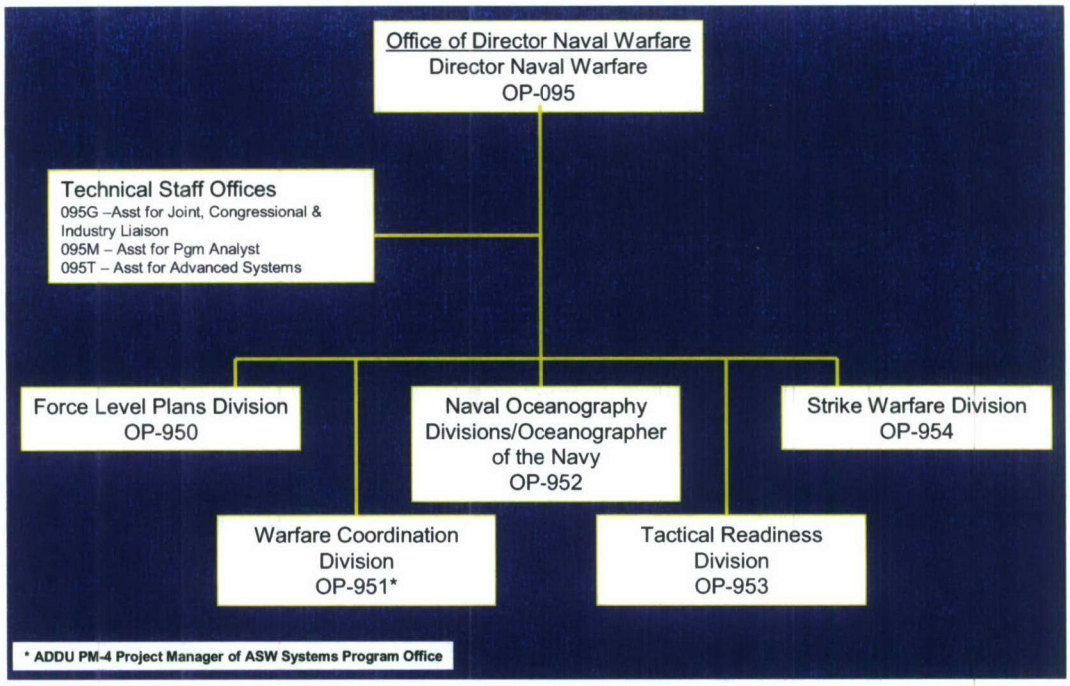


Figure 19. OP-095 in March 1980

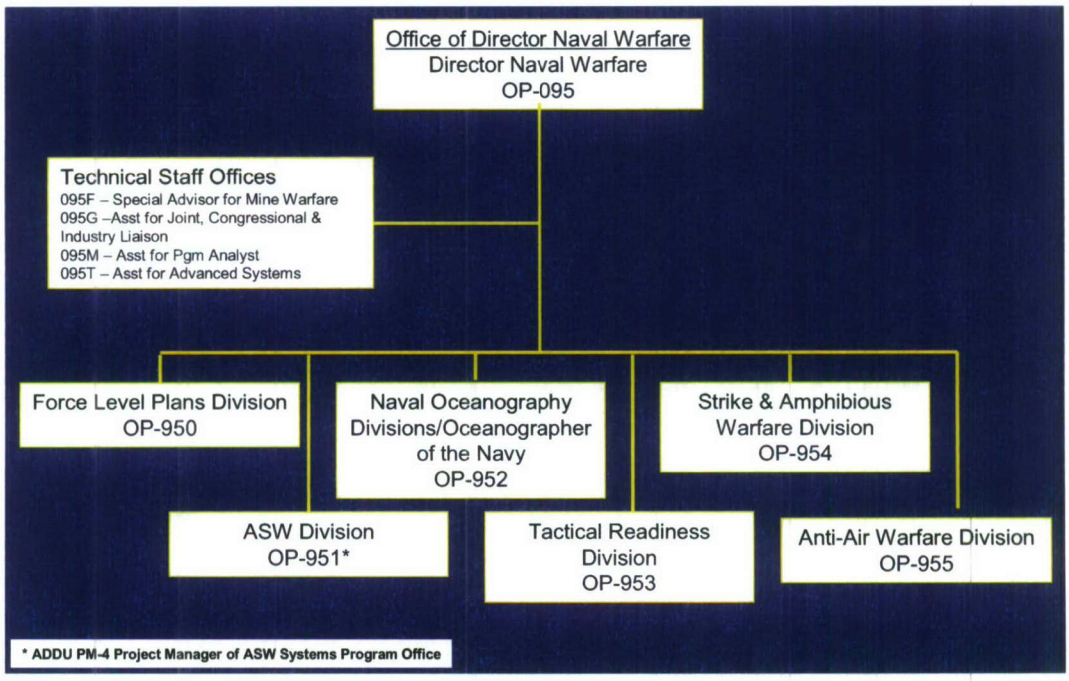


Figure 20. OP-095 in November 1980

The change from Director of ASW Programs to Director of Naval Warfare changed OP-095's ASW roles and responsibilities. Up to this point, the OP-095 mission was effective responsibility for all OPNAV matters pertaining to ASW. The new OP-095 ASW mission emphasis changed "[t]o exercise centralized coordination of planning and requirements for fleet readiness, modernization and force levels associated with the conduct of tactical warfare by general purpose naval forces."[38] From an ASW perspective, the OP-951 functions began to be oriented towards multi-platform ASW planning and requirements. Platform- or unit-level ASW capability became the domain of the platform sponsors.

The functions of OP-095 continued to evolve with time, as shown in the organizational construct of March 1985 (see figure 21).[39] As SECNAV, Lehman disestablished NAVMAT effective 6 May 1985. He eliminated NAVMAT to break the existing chain of command for acquisition—from CNM to CNO—and replace it with a chain of command from the SYSCOMs to SECNAV, with administrative linkage to the CNO.[28, 35] Lehman's intent was to reinstitute hierarchical accountability in the acquisition bureaucracy by eliminating matrix management. He wrote: "Matrix organizations shared responsibility, so no one ever could be blamed, and no lessons were ever learned. The same mistakes kept being made over and over again."[35]

From an ASW perspective, the disestablishment of NAVMAT eliminated the OP-951 ADDU as PM-4. A consolidated ASW office was not established within the SYSCOM infrastructure; as a consequence, ASW responsibilities were further decentralized. This was recognized in the March 1985 OPNAV organization manual changes, since the ADDU responsibility had already been eliminated.[39]

In 1986 the CNO, ADM Carlisle A. H. Trost, reorganized the OPNAV DCNO and ACNO positions. He designated the functional sponsors as DCNO positions and the platform sponsors as ACNO positions. OP-095 became OP-07.[28] This organizational construct remained through the end of the Cold War.

4.2 ORGANIZATIONAL THEMES

Unlike the organizational changes observed in the earlier two Cold War eras (described in sections 2 and 3), the organizational changes described in this section were not driven by ASW issues. ADM Haywood recognized the need for a warfighting strategy better attuned to the Soviet Navy warfighting intent discerned in the evolving intelligence. The resultant maritime strategy established a need to make major changes to the U.S. Navy posture, which necessarily affected the OPNAV organization. The Director of Naval Warfare was empowered to integrate warfighting capability across the warfare areas.

It is interesting to note how the shift from the early Cold War Navy emphasis on SLOC protection to the later Cold War emphasis on forward presence and anti-SSBN operations was reflected in a change in the OPNAV emphasis on ASW (see figure 22).

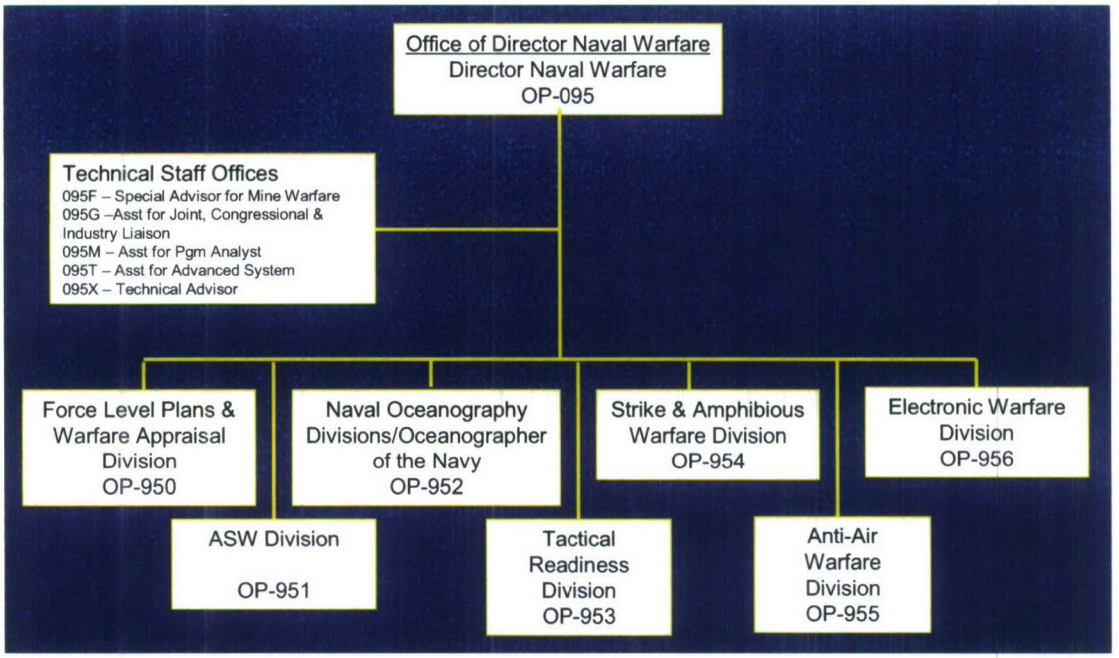


Figure 21. OP-095 in March 1985

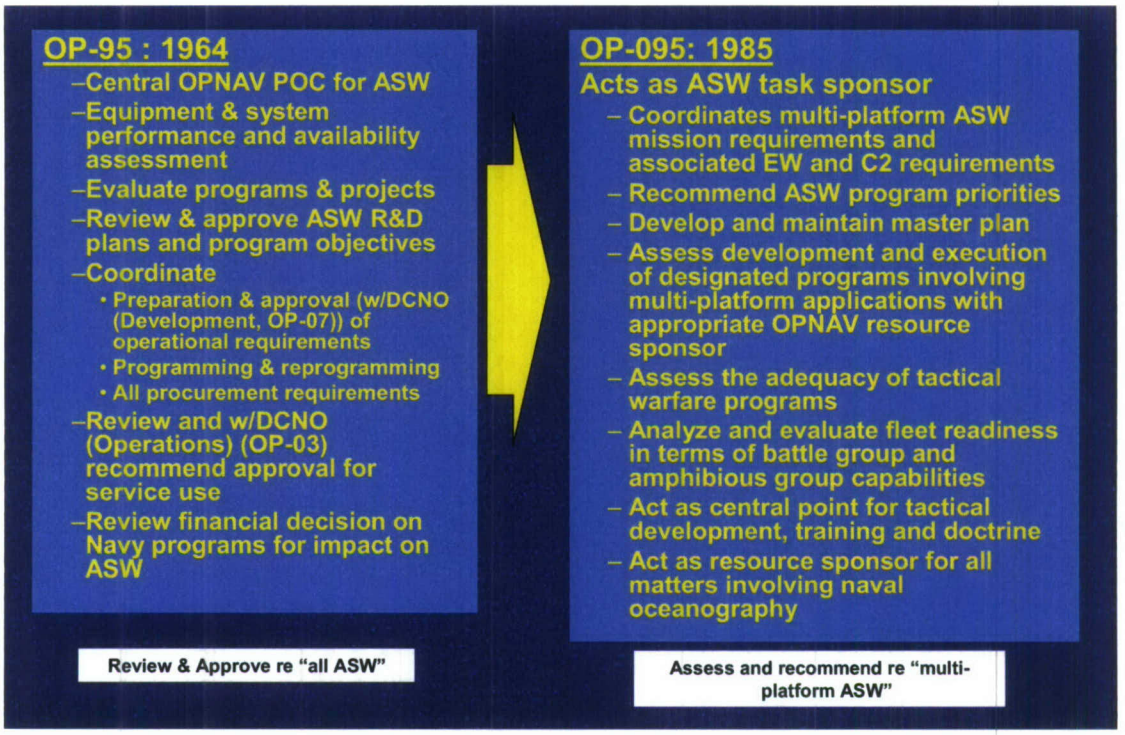


Figure 22. Evolution of Key OP-95 Responsibilities

5. CONCLUSION

The Cold War ultimately produced an advanced state of U.S. preparedness for executing an ASW strategy. The introduction of strategic weapons on Soviet submarines galvanized the will of the nation to contain this risk. Strategy and DOTMLPF were revised and refined as required to adapt to the evolving Soviet threat.

This effort was realized in the form of what Chapman describes as a national ASW system (see figure 23).[40] Operations, readiness, and proficiency were refined across National Command Authority, operational fleets, intelligence agencies, shore infrastructure, and the technology and acquisition communities. The degree to which the Navy had an advantage varied with technology insertion on both sides and the impact of espionage, but the United States developed and maintained ASW superiority.

Proper execution required effective organizations empowered to succeed. The Navy leadership rose to the challenge and made organizational changes necessary to address key ASW issues and reduce risk. These changes were accomplished in the context of national security needs and ASW strategies linked to the national strategy.

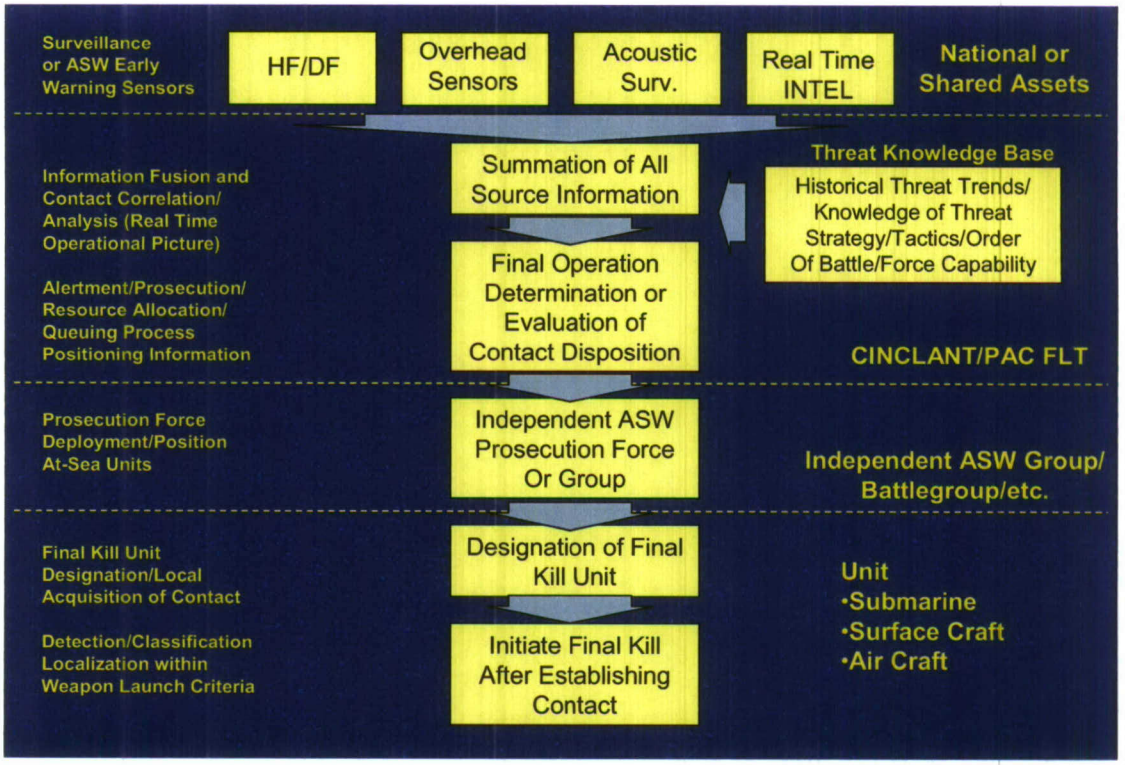


Figure 23. National ASW System (Cold War)

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